

WHAT IS CLAIMED IS:

1. An electronic connector for use with an electrical connection device, the electronic connector comprising:
  - at least one first conductor providing an interface with the electrical connection device, the at least one first conductor having a shape that provides a predetermined capacitive and inductive balance in the electronic connector; and
  - a conductor support device to support the at least one first conductor.
2. The electronic connector according to in claim 1, wherein the shape of the at least one first conductor compensates for at least one of a capacitive and an inductive imbalance.
3. The electronic connector according to claim 1, wherein the at least one first conductor comprises a plurality of integrally formed compliant pins, each of the compliant pins comprising:
  - a bent portion that provides the interface with the electrical connection device;
  - a contact point opposite the bent portion; and
  - at least one compensation section disposed between the bent portion and the contact point.
4. The electronic connector according to claim 3, wherein the plurality of compliant pins are formed in at least one layer.
5. The electronic connector according to claim 3, wherein the contact points are arranged in parallel rows.
6. The electronic connector according to claim 4, wherein the at least one layer includes at least two layers, and the shape of the at least one first conductor may be changed to provide the desired electrical characteristics by altering a distance between the at least two layers.
7. The electronic connector according to claim 3, wherein the shape of the at least one first conductor may be changed to provide the desired electrical characteristics by altering a distance between the at least two compensation sections.

8. The electronic connector according to claim 4, wherein the at least one layer includes at least two layers, the at least one compensation section includes at least two compensation sections, and the shape of the at least one first conductor may be changed to provide the desired electrical characteristics by altering a distance between the at least two layers and the at least two compensation sections.
9. The electronic connector according to claim 1, wherein the shape of the at least one first conductor reduces at least one of near-end cross-talk, far-end cross-talk, return loss and insertion loss.
10. The electronic connector according to claim 3, wherein the conductor support device includes a conductor carrying sled, each of the plurality of integrally formed compliant pins being attached to the conductor carrying sled to contact the electrical connection device.
11. The electronic connector according to claim 3, wherein the conductor support device includes a conductor housing, each of the plurality of integrally formed compliant pins being attached to the conductor housing to contact the electrical connection device.
12. The electronic connector according to claim 1, wherein the at least one first conductor includes at least one of an electrically conductive material, a substantially electrically conductive material, and a semi-electrically conductive material.
13. The electronic connector according to claim 3, further comprising:
  - a housing defining a contact connecting portion to house the conductor support device;
  - a connecting device connected to the compliant pins at the contact points;
  - at least one second conductor having a contact portion and a bifurcated portion, the at least one second conductor being connected to the connecting device at the contact portion;
  - a rear sled portion having at least one slot to receive the bifurcated portion of the at least one second conductor, the rear sled being engageable with the housing; and
  - a wire containment fixture to position at least one wire for engagement with the bifurcated portion of the at least one second conductor, the wire containment fixture being engageable with the rear sled.

14. The electronic connector according to claim 13, wherein the connecting device electrically and mechanically mates the at least one first conductor and the at least one second conductor.
15. The electronic connector according to claim 13, wherein the connecting device reduces at least one of a capacitive and an inductive imbalance.
16. The electronic connector according to claim 13, wherein the connecting device reduces at least one of near-end cross-talk, far-end cross-talk, return loss and insertion loss.
17. The electronic connector according to claim 13, wherein the connecting device includes at least three layers that includes outer layers containing a plurality of conductive traces that interconnect the at least one first conductor and the at least one second conductor.
18. The electronic connector according to claim 13, wherein the connecting device is a printed circuit board.
19. The electronic connector according to claim 13, wherein the at least one second conductor reduces at least one of a capacitive and an inductive imbalance.
20. The electronic connector according to claim 13, wherein the at least one second conductor electrically and mechanically mates the at least one wire and the connecting device.
21. The electronic connector according to claim 13, wherein the at least one second conductor includes at least one of an electrically conductive material, a substantially electrically conductive material, and a semi-electrically conductive material.
22. The electronic connector according to claim 13, wherein the rear sled portion is connected to the housing by at least one of a hoop snap and a stirrup snap.

23. The electronic connector according to claim 13, wherein at least one of the housing, the conductor support device, the rear sled portion and the wire containment fixture include a synthetic resin.
24. The electronic connector according to claim 13, wherein the wire containment fixture includes a stepped portion to prevent a portion of the wires from extending into the electronic connector beyond a desired position.
25. The electronic connector according to claim 3, wherein the bent portion reduces an amount of cross-talk.
26. The electronic connector according to claim 3, further comprising a straight portion extending from the bent portion, the straight portion extending away from the bent portion at an angle.
27. The electronic connector according to claim 26, wherein the straight portion reduces an amount of cross-talk.
28. The electronic connector according to claim 3, further comprising a transition area being located between the bent portion and the at least one compensation section.
29. The electronic connector according to claim , wherein the inductance is added at the at least one compensation section.
30. The electronic connector according to claim 1, wherein at least one of the predetermined capacitive and inductive balance is added to compensate for at least one of NEXT and FEXT.
31. A method of providing a predetermined capacitive and inductive balance in an electronic connector, comprising:
- providing an electronic connector having at least one first conductor, the at least one first conductor having a plurality of integrally formed compliant pins, wherein each of the compliant pins includes a bent portion, a contact point opposite the bent portion, and at least one compensation section disposed between the bent portion and the contact point;

measuring at least one of magnitude and phase of an unwanted electric phenomenon;  
and

altering a distance between the compliant pins to compensate for the at least one magnitude and phase.

32. A method of providing a predetermined capacitive and inductive balance in an electronic connector, comprising:

providing an electronic connector having at least one first conductor, the at least one first conductor having a plurality of integrally formed compliant pins, wherein each of the compliant pins includes a bent portion, a contact point opposite the bent portion, and at least one compensation section disposed between the bent portion and the contact point;

measuring at least one of magnitude and phase of an unwanted electric phenomenon;  
and

altering a distance between compensation sections to compensate for the at least one magnitude and phase.

33. The method according to claim 31, further comprising altering a distance between compensation sections to compensate for the at least one magnitude and phase.

34. A method of providing a predetermined capacitive and inductive balance in an electronic connector, comprising:

providing an electronic connector having at least one first conductor, the at least one first conductor having a plurality of integrally formed compliant pins, wherein each of the compliant pins includes a bent portion, a contact point opposite the bent portion, and at least one compensation section disposed between the bent portion and the contact point;

measuring at least one of magnitude and phase of an unwanted electric phenomenon;  
altering a distance between the compliant pins to compensate for the at least one magnitude and phase; and

providing a connecting device connected to the at least one first conductor, wherein the connecting device further compensates for the at least one magnitude and phase of the unwanted electric phenomenon.

35. The method according to claim 34, further comprising providing at least one second conductor, connected to the connecting device and at least one wire, the at least one second

conductor having a shape that further compensates for the at least one magnitude and phase of the unwanted electric phenomenon.

36. A method of providing a predetermined capacitive and inductive balance in an electronic connector, comprising:

- providing an electronic connector having at least one first conductor, the at least one first conductor having a plurality of integrally formed compliant pins, wherein each of the compliant pins includes a bent portion, a contact point opposite the bent portion, and at least one compensation section disposed between the bent portion and the contact point;

- measuring at least one of magnitude and phase of an unwanted electric phenomenon;

- altering a distance between compensation sections to compensate for the at least one magnitude and phase; and

- providing a connecting device connected to the at least one first conductor, wherein the connecting device further compensates for the at least one magnitude and phase of the unwanted electric phenomenon.

37. The method according to claim 36, further comprising providing at least one second conductor, connected to the connecting device and at least one wire, the at least one second conductor having a shape that further compensates for the at least one magnitude and phase of the unwanted electric phenomenon.

38. The method according to claim 34, further comprising altering a distance between compensation sections to compensate for the at least one magnitude and phase.

39. The method according to claim 35, further comprising altering a distance between compensation sections to compensate for the at least one magnitude and phase.

40. An electronic connector for use with a modular plug, the electronic connector comprising:

- a conductor;

- a printed circuit board; and

- a conductor sled assembly to position the conductor for insertion into the printed circuit board and provide proper alignment to mechanically and electromagnetically mate the conductor with the modular plug.

41. An electronic connector for use with a modular plug, the electronic connector comprising:

a housing; and

a rear sled having at least one of a stirrup-type snap and a cantilever snap, the rear sled being engageable with the housing and mates to the housing by at least one of the stirrup-type snap and the cantilever snap, wherein the housing is of a shape to receive a modular plug.

42. An electronic connector for use with a modular plug, the electronic connector comprising:

a housing; and

a rear sled having at least one of a hoop-type snap and a cantilever snap, the rear sled being engageable with the housing and mates to the housing by at least one of the hoop-type snap and the cantilever snap, wherein the housing is of a shape to receive a modular plug.